CALL FOR RESEARCH PROPOSALS

With the support of the FedEx Institute of Technology, the Intermodal Freight Transportation Institute (IFTI) at the University of Memphis is pleased to announce a new interdisciplinary research focus in biologistics. The pace at which the biosciences industry and clinical research are evolving has created an explosive demand for temperature-controlled logistics services (cold-chain logistics). The demand for these services is projected to increase by more than 60% by 2020. The intersection of intermodal access and the significant logistics and biosciences industries uniquely positions Memphis to become a leader in this rapidly evolving field.

The unique nature of biomaterials and advanced pharmaceuticals creates new challenges not only for those needing to ship or receive them but also for supply chain and logistics providers due to the high-value and temperature/time sensitive nature of the products and the increasingly stringent regulatory requirements for shipment control and monitoring. This creates a need for new and more advanced storage and distribution infrastructure, customizable supply chain strategies, innovative solutions to scheduling and validation problems, and a highly specialized and compliant network to enable predictive insight, generate alternative procedures, and mitigate risk so that product integrity is maintained.

IFTI is calling for proposals from ALL faculty at the University of Memphis for interdisciplinary research pertaining to any aspect of biologistics. The FedEx Institute of Technology will provide seed funding to several pilot projects averaging about $20k each that will help establish the University as a premier research hub for biologistics. Proposals should be between 5-6 pages in length (Word or PDF format) and include the following: research justification, theoretical basis, research methodology, anticipated contribution to theory and practice, community impact, timeline and a brief budget. Applicants are also encouraged to specify in their proposals opportunities and mechanisms for data collection and collaboration with industry, community and government partners.
Priority will be given to proposals that can: 1) directly benefit our regional community, corporate and government partners; 2) yield advanced content that is relevant to IFTI’s training and certification mission; and/or 3) engage new disciplines in IFTI’s interdisciplinary research portfolio. Faculty whose proposals are selected for funding will be designated as Biologistics Research Fellows of the FedEx Institute of Technology. They will also be required to present results of their research at an annual conference on biologistics organized by IFTI at the FedEx Institute of Technology.

Some specific examples of areas of research interest include the following but faculty are encouraged to propose other interdisciplinary aspects as well:

- Advances in smart systems for end-to-end tracking
- Advanced packaging solutions
- Adaptive solutions for risk mitigation
- Big-data analysis
- Centralized bio repository potential in Memphis for increasing logistical efficiencies
- Legal issues impacting biologistics and the Internet of Things
- Social and community impacts pertaining to biologistics
- Developing evidence-based standards for cold-chain logistics
- Integration of IoT to enable predictive insights into biologistics optimization
- Innovative use of real-time data in cold-chain processes
- Novel materials handling processes
- Modeling/optimization for reducing supply chain vulnerability
- Solutions to regulatory compliance/GDP challenges
- Real-time solutions for logistics challenges
- Supply-chain strategies for improving operational efficiency

Deadline for receipt of proposals is October 15, 2015. Please submit proposals as email attachments addressed to: Dr. Mihalis Golias at mgkolias@memphis.edu. A selection committee of logistics experts and FIT & IFTI leadership will review applications and select those for funding. Those submitting proposals will be notified regardless of outcome within several weeks of the committee’s meeting. To foster interdisciplinary collaboration, successful proposals may be clustered into distinct research groups under IFTI that will be tasked with developing larger grant proposals from external granting bodies.

For further information please contact Drs. Stephanie Ivey and Mihalis Golias at ssalyers@memphis.edu or mgkolias@memphis.edu.